



# Public Investor

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## Public Investor

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## Investing Through Benchmarking

*By Deanne Woodring, Dave Westcott, and Sally Walton*

How are your investments performing? What is happening to the principal value of your portfolio when interest rates change? What are the appropriate risk and returns that can be expected for the types of funds you are investing? Did your portfolio perform up to expectations? How were these expectations derived and communicated? The answers to these questions and many more are an integral part of effective investment management. Benchmarking is the process that provides performance analysis and creates a method to communicate expectations and results.

Public fund investors are confronted with many challenges including

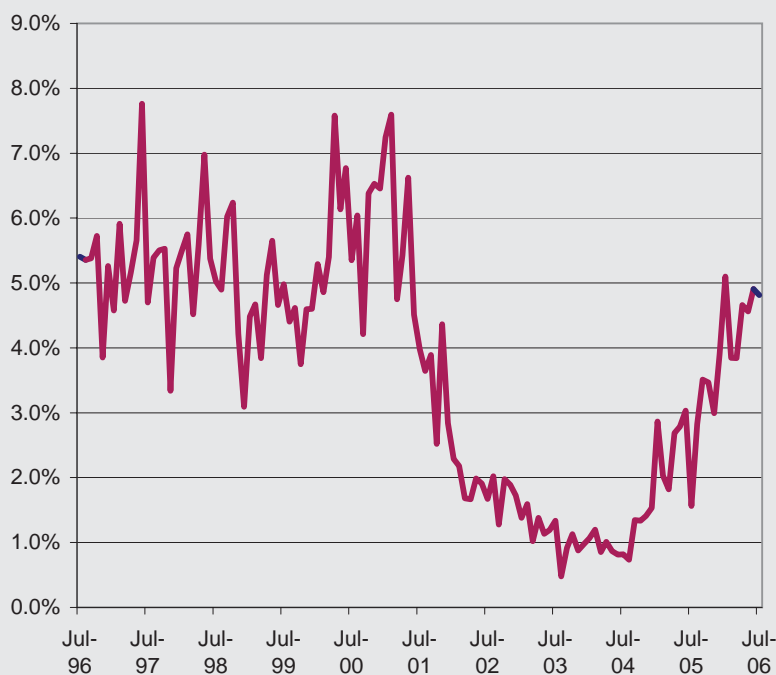
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## Public Investor 10-Bill Index

The *Public Investor* 10-Bill Index is a portfolio benchmark that simulates the cash flow demands of a typical government with biweekly payrolls and other cash requirements. To create a portfolio of securities that generates income every two weeks, the 10-Bill Index contains a synthetic portfolio of 10 Treasury bills. The maturity dates are staggered so that one of the 10 bills matures every two weeks. The portfolio has an average maturity of approximately 12 weeks, or 83 days.

Because the 10-Bill index is based on riskless Treasury bills, it should provide a minimum performance standard for the average government cash management portfolio. Investors who purchase bank CDs, commercial paper, and federal agency securities should be able to consistently outperform this index because those yields should be higher to compensate for the higher credit and liquidity risk. ☘

## Ten Years of the Public Investor 10-Bill Index



## Benchmarks — *continued from page 1*

uncertain cash flows, volatile interest rates, regulatory changes, and fiduciary responsibility. Public fund objectives require that liquidity needs be satisfied while preserving capital and simultaneously achieving market rates of return. Most governmental entity investment policies identify the objectives and the securities used to meet these objectives. However, seldom do such policies establish a process or a procedure to monitor risk and measure returns. Benchmarking is a step in the investment management process that addresses risk management, yield enhancement, and the monitoring of investment returns versus expectations.

**What is a benchmark?** A benchmark is a composite of securities with specific maturity and asset class characteristics that represent a portion of the financial market universe. Investors can simulate the expected risk and return of various benchmarks to determine the most appropriate structure for their portfolio. A benchmark index has the following characteristics:

1. Contains a composite of securi-

## Exhibit 1 Historical Risk and Return Data

	Returns as of 12/31/05 Annualized Total Return 12/95 - 12/05	Effect of a 100-Basis-Point Change in Interest Rates	
		Percentage Change in Principal	Dollar Change per \$10 million Invested
Treasury Bill 3-month	3.84	.20%	\$ 20,000
Treasury 0-1 year	4.07	.46%	\$ 46,000
Treasury 0-3 year	4.49	1.21%	\$121,000
Treasury 1-3 year	4.78	1.68%	\$168,000
Treasury 0-5 year	4.72	1.76%	\$176,000
Treasury 1-5 year	5.04	2.29%	\$229,000
Treasury 1-10 year	5.32	3.25%	\$325,000
All Agency 1-3 year	5.04	1.67%	\$167,000
All Agency 1-5 year	5.27	2.16%	\$216,000

Source: Bloomberg - Merrill Lynch Indices

- ties maintained within specific parameters
2. Provides information
3. Is rule-based, not managed
4. Can be measured
5. Remains relatively stable in regards to duration and asset allocation.

**How do you use a benchmark?** Investors use benchmarks to assess the performance of their portfolio and to oversee incremental changes to that portfolio.

**Example of benchmarks.** Many

short-term public fund investors use the Treasury one- to three-year index as a benchmark for core balances, because it reflects the maturity structure, quality, and market exposure consistent with their investment objectives and policy. The Treasury one- to three- year index is a composite measurement of every U.S. Treasury note in the market from one year to three years in maturity. Several firms provide this type of index.

History illustrates that, over longer periods of time, having investments exposed longer out on the yield curve results in greater returns, but this comes with a risk of periodic market price declines that must be considered when determining appropriate exposure. The Treasury one- to three-year index portfolio has provided approximately 94 basis points of additional return relative to the three-month bill over the last 10 years. We believe the best risk-adjusted returns for conservative investors with relatively low price volatility comes from this sector of the curve. In addition, the 1.8 year average maturity of the index falls within the guidelines of most investment policies and is an appropriate exposure for public fund idle cash balances. It is important to note that this type of benchmark is appropriate for idle funds (core funds) not for funds needed for liquidity pur-

## Who Could Benefit from Integrating a Benchmark into the Investment Process

The concept of using a benchmark is certainly not a new idea. Money managers and most pension funds have been using benchmarks for years. Short-term public fund managers are finding the use of benchmarks helpful for several reasons.

1. It provides overall investment strategy and specific guidelines that are clearly communicated.
2. It ensures that the risk and return profile is consistent with management practices and expectations.
3. It provides accountability for investment decisions.
4. It explains and illustrates the reason for market price fluctuations in the portfolio, which is being brought into the spotlight through the Government Accounting Standards Board's (GASB) Statement No. 31, *Accounting and Financial Reporting for Certain Investments and for External Investment Pools*.
5. It ensures that a disciplined investment process is in place.

This type of benchmarking process is ideal for public fund managers that have excess liquidity or idle funds. The liquidity portfolio is then managed to meet cash flow needs and remains very short. The balance of the funds are monitored and managed against an appropriate benchmark. Most public investors using this process maintain a combined market exposure between the liquidity portion and benchmarked portion of under one year.

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poses (liquidity funds).

### Decision-making Using a Benchmark.

An investor's portfolio structure is adjusted relative to the benchmark depending on the market outlook or the entity's specific needs. We suggest establishing a minimum and maximum exposure (duration) around the benchmark as part of the strategy to achieve enhanced market rates of return. As new money is available, the maturity selection of the new investment would be dictated by the current and targeted overall portfolio exposure (duration) relative to the benchmark.

*Is outperforming the benchmark the key to this process? No.* The key to the process is to establish a disciplined approach to placing investment funds out longer on the yield curve so as to enhance returns over longer periods of time, while controlling risk. The goal is not to significantly outperform the index, but to achieve the return of the index or enhance it by using conservative portfolio management tools. These tools may include the following:

- Either being shorter or longer than the duration of the benchmark. An acceptable difference between the duration of the benchmark and the portfolio is predetermined. The greater the

### Steps in Choosing a Benchmark

1. Choose a type of security that:
  - Comes from appropriate industry or sector
  - Has a similar duration
2. Calculate one-month, six-month, and 12-month averages.
3. Choose an index that is:
  - Investable
  - Measurable
  - Repeatable
  - Consistent with portfolio guidelines
4. Create a composite.

### Common Benchmarks

- **Fed funds**  
<http://research.stlouisfed.org/fred2/categories/118>
- **Standard & Poor's LGIP Index**  
 Source: Published monthly in the *Public Investor*
- **Public Investor 10-bill Performance Index**  
 Source: Published monthly in the *Public Investor*
- **Constant Maturity Treasury rates**  
<http://www.treas.gov/offices/domestic-finance/debt-management/interest-rate/yield.shtml>
- **Merrill Lynch U.S. Treasury and Agency Indexes**  
[http://www.davidsoncompanies.com/fim/a\\_fia/24.cfm?groupid=13&linkid=24](http://www.davidsoncompanies.com/fim/a_fia/24.cfm?groupid=13&linkid=24)
- **Lehman Brothers Government Bond Indexes**  
<http://www.lehman.com/fi/indices/global.htm#>
- **Merrill Lynch U.S. Corporates A-AAA**  
<http://www.investinginbonds.com/marketatagance.asp?catid=33>

acceptable range around the duration of the benchmark, the greater the return variable.

- Investing at a particular point on the yield curve. A barbell structure (combination one-year notes and three-year notes) will outperform a benchmark when the yield curve flattens and a bullet structure (all two-year notes) will outperform a benchmark when the yield curve steepens.
- Investing in asset classes outside the benchmark issues; e.g., adding U.S. agency obligations or asset-backed securities to a generic U.S. Treasury portfolio. This tool should be considered after credit quality variation is taken into account.

### *Are there other benefits to benchmarking?*

*Yes.* The benchmarking process provides a discipline to the investment management process and helps reduce the "shoot from the hip" syndrome to emotional swings in the market. But most importantly, it communicates to all the expected returns and risk associated with the portfolio based on the historical performance of the benchmark and the acceptable level of variance from the benchmark. This process

will reduce the probability of results that are significantly outside an expected range, which should enhance the risk management process for those with fiduciary responsibilities.

Benchmarking provides the public fund investor with a clear sense of direction, accountability, and tools to balance risk and return. This disciplined strategy can be clearly communicated to pool participants, boards, and other interested parties. This increase in communication alone is a significant step in the development of the investment management process.

Investment advisors are available to assist internal investment officers in designing, managing, and reporting portfolio characteristics relative to the appropriate benchmark. Most public fund advisors are sensitive to implementing a cost beneficial relationship in providing these types of services. ❧

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